



COVID-NET

COVID-19

Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET)

Updated Nov. 30, 2021

Purpose and Methods

Population-based surveillance is the collection, analysis, and interpretation of data on a population in a specified area.

COVID-NET is a population-based surveillance system.

About COVID-NET

Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET) is a population-based surveillance system that collects data on laboratory-confirmed COVID-19-associated hospitalizations among children and adults through a network of over 250 acute-care hospitals in 14 states.

Why COVID-NET Data Is Important

COVID-NET is CDC's source for important data on hospitalization rates associated with COVID-19. Hospitalization rates are updated weekly. COVID-NET also provides important clinical information on COVID-19-associated hospitalizations, including age group, sex, race/ethnicity and underlying health conditions.



Hospitalization Rates



Patient Characteristics



Hospitalization Rates by Vaccination Status

COVID-NET Data Collection, Timeliness and Interpretation

Cases are identified in COVID-NET if they test positive for SARS-COV-2 (the virus that causes COVID-19 disease) through a test ordered by a health care professional and are hospitalized within 14 days of the positive test. Clinical data are collected using a standardized case reporting form by trained surveillance officers, so the data are collected in a standardized and uniform way.

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COVID-NET is expected to collect the following data for each case:

- age
- sex
- surveillance site
- date of hospital admission
- evidence of positive SARS-CoV-2 test
- demographic information (e.g., race, ethnicity)
- clinical (medical) history (underlying health conditions)
- clinical course (progression of the illness such as admission to an intensive care unit)
- medical interventions (medical care for the illness such as need for mechanical ventilation)
- outcomes (e.g., released from the hospital, death)

How COVID-NET Hospitalization Data Is Different from Hospitalizations Reported in National and State Case Counts

COVID-NET differs from hospitalizations reported in national and state case counts in two ways. First, state and national COVID-19 case reporting are based on all people who test positive for COVID-19 in the United States. COVID-NET is limited to COVID-19-associated hospitalizations captured in the COVID-NET surveillance area. Second, COVID-NET reports rates and not just counts. These rates show how many people are hospitalized with COVID-19 in the surveillance area, compared to the entire number of people residing in that area.

How COVID-NET Calculates Hospitalization Rates

Hospitalization rates are calculated by the number of residents of a defined area who are hospitalized with a positive SARS-CoV-2 laboratory test divided by the total population within that defined area.

COVID-NET coverage

COVID-NET comprises 99 counties in the 14 states participating in the [Emerging Infections Program \(EIP\)](#) and the Influenza Hospitalization Surveillance Project (IHSP). Participating states include: California, Colorado, Connecticut, Georgia, Iowa, Maryland, Michigan, Minnesota, New Mexico, New York, Ohio, Oregon, Tennessee, and Utah.

COVID-NET covers approximately 10 percent of the U.S. population. The counties covered are located in all 10 [Health and Human Services \(HHS\) regions](#) [↗](#). The designated COVID-NET surveillance area is generally similar to the U.S. population by demographics; however, the information might not be generalizable to the entire country.

COVID-NET Surveillance Area

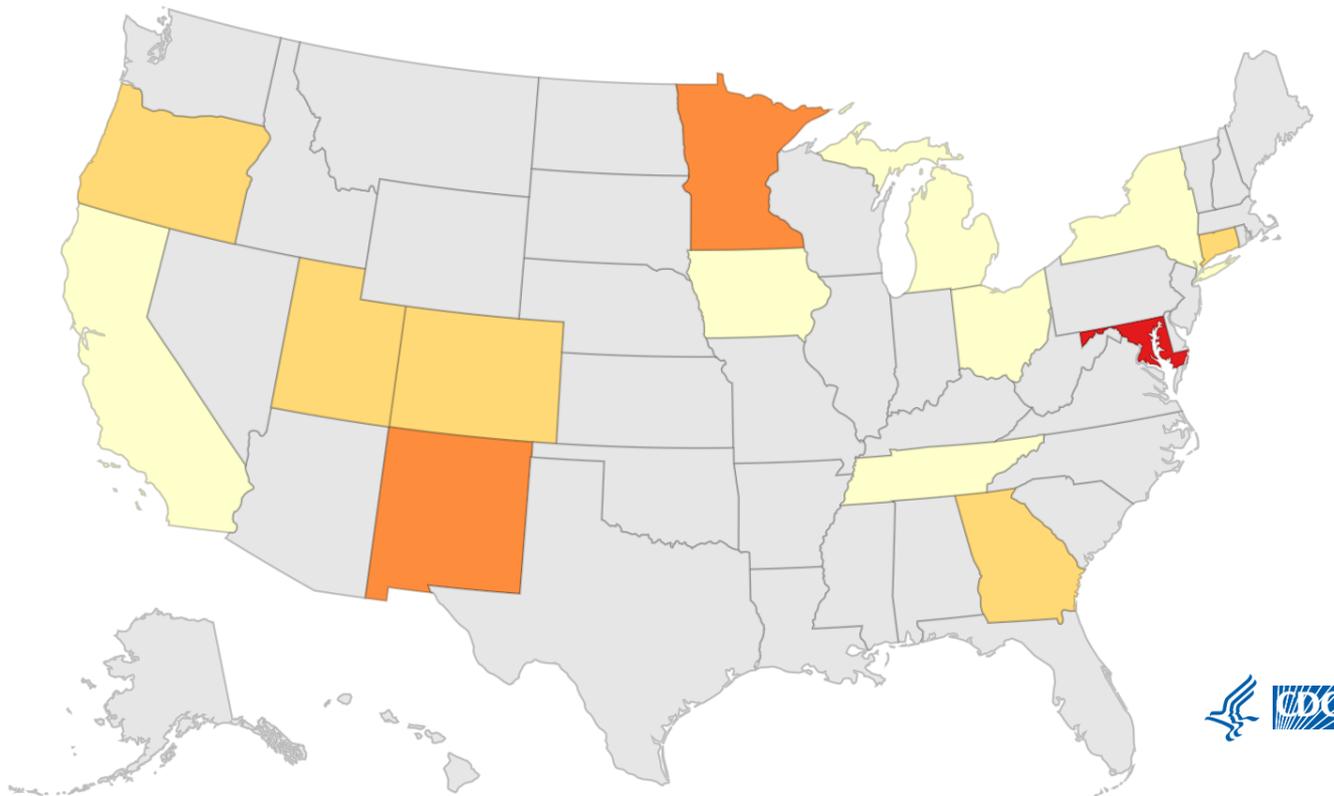
Percentage of state population represented by participating COVID-NET counties

● 4% - < 28%

● 28% - < 52%

● 52% - < 76%

● 76% - 100%



COVID-NET Sites		
Location	% of State Populatio...	Number of Participati...
● California	9%	3
● Colorado	49%	5
● Connecticut	29%	2
● Georgia	39%	8
● Iowa	4%	1
● Maryland	100%	24
● Michigan	13%	5
● Minnesota	55%	7
● New Mexico	61%	7
● New York	11%	15
● Ohio	18%	10
● Oregon	44%	3
● Tennessee	26%	8
● Utah	36%	1

[Download Data \(CSV\)](#)

Accessing COVID-NET Data

COVID-19-associated hospitalization rates are reported to CDC on a weekly basis. COVID-NET data, including [hospitalization rates for different age groups](#) and [data on patient characteristics](#), are available on [COVIDView](#)

COVID-NET hospitalization data are preliminary and may change as more data is received. In particular, case counts and rates for recent hospital admissions are subject to lag. As data are received each week, prior case counts and rates are updated accordingly.

COVID-NET Publications

- Taylor CA, Patel K, Pham H, et al. Severity of Disease Among Adults Hospitalized with Laboratory-Confirmed COVID-19 Before and During the Period of SARS-CoV-2 B.1.617.2 (Delta) Predominance — COVID-NET, 14 States, January–August 2021. MMWR Morb Mortal Wkly Rep. ePub: 22 October 2021. DOI: https://www.cdc.gov/mmwr/volumes/70/wr/mm7043e1.htm?s_cid=mm7043e1_w

- Acosta AM, Garg S, Pham H, et al. Racial and Ethnic Disparities in Rates of COVID-19–Associated Hospitalization, Intensive Care Unit Admission, and In-Hospital Death in the United States From March 2020 to February 2021 [↗](#). *JAMA Netw Open*. 2021;4(10):e2130479. doi:10.1001/jamanetworkopen.2021.30479
- Wortham JM, Meador SA, Hadler JL, et al. Census tract socioeconomic indicators and COVID-19-associated hospitalization rates-COVID-NET surveillance areas in 14 states, March 1-April 30, 2020. *PLoS One*. 2021 Sep 24;16(9):e0257622. doi: 10.1371/journal.pone.0257622 [↗](#). PMID: 34559838; PMCID: PMC8462704.
- Delahoy MJ, Ujamaa D, Whitaker M, et al. Hospitalizations Associated with COVID-19 Among Children and Adolescents — COVID-NET, 14 States, March 1, 2020–August 14, 2021. *MMWR Morb Mortal Wkly Rep*. ePub: 3 September 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7036e2> [↗](#).
- Havers, F. P., Pham, H., Taylor, C. A, et al. (2021). COVID-19-associated hospitalizations among vaccinated and unvaccinated adults ≥18 years – COVID-NET, 13 states, January 1 – July 24, 2021. <https://doi.org/10.1101/2021.08.27.21262356> [↗](#)
- Moline HL, Whitaker M, Deng L, et al. Effectiveness of COVID-19 Vaccines in Preventing Hospitalization Among Adults Aged ≥65 Years — COVID-NET, 13 States, February–April 2021. *MMWR Morb Mortal Wkly Rep* 2021;70:1088-1093. DOI: <http://dx.doi.org/10.15585/mmwr.mm7032e3> [↗](#).
- Garg S, Patel K, Pham H, et al. Clinical Trends Among U.S. Adults Hospitalized With COVID-19, March to December 2020 [↗](#): A Cross-Sectional Study. *Ann Intern Med*. [Epub ahead of print 10 August 2021]. doi:10.7326/M21-1991 [↗](#)
- Havers FP, Whitaker M, Self JL, et al. Hospitalization of Adolescents Aged 12–17 Years with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 1, 2020–April 24, 2021. *MMWR Morb Mortal Wkly Rep*. 2021; 70:851–857.
- Ko JY, Danielson ML, Town M, et al. Risk Factors for COVID-19-associated hospitalization: COVID-19-Associated Hospitalization Surveillance Network and Behavioral Risk Factor Surveillance System. [↗](#) *Clin Infect Dis*. 2021 Jun 1; 72(11):e695-e703.
- Cha S, Henry A, Montgomery MP, et al. Morbidity and Mortality among Adults Experiencing Homelessness Hospitalized with COVID-19 [↗](#), *The Journal of Infectious Diseases*, ePub: 16 May 2021.
- Kim L, Garg S, O'Halloran A, et al. Risk Factors for Intensive Care Unit Admission and In-hospital Mortality among Hospitalized Adults Identified through the U.S. Coronavirus Disease 2019 (COVID-19)-Associated Hospitalization Surveillance Network (COVID-NET). [↗](#) *Clin Infect Dis*. 2021 May 4; 72(9): e26-e214.
- Owusu D, Kim L, O'Halloran A, et al. Characteristics of Adults aged 18-49 years without Underlying Medical Conditions Hospitalized with Laboratory Confirmed COVID-19 in the United States, COVID-NET – March – August 2020 [↗](#). *Clin Infect Dis*. 2021 Mar 1; 72(5): e162-166.
- Joo H, Miller GF, Sunshine G, et al. Decline in COVID-19 Hospitalization Growth Rates Associated with Statewide Mask Mandates — 10 States, March–October 2020. *MMWR Morb Mortal Wkly Rep*. 2021; 70:212–216.
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- Kim L, Whitaker M, O'Halloran A, et al. Hospitalization Rates and Characteristics of Children Aged <18 Years Hospitalized with Laboratory-Confirmed COVID-19 — COVID-NET, 14 States, March 1–July 25, 2020. [↗](#) *MMWR Morb Mortal Wkly Rep*. 2020;69:1081–1088.
- Garg S, Kim L, Whitaker M, et al. Hospitalization Rates and Characteristics of Patients Hospitalized with Laboratory-Confirmed Coronavirus Disease 2019 – COVID-NET, 14 States, March 1-30, 2020. *MMWR Morb Mortal Wkly Rep*. 2020;69:458-464.

Resources

Data Visualization

[COVIDView Weekly Summary](#)

[COVIDview Weekly Summary](#)

[FAQ: COVID-19 Data and Surveillance](#)

[Cases, Data, and Surveillance](#)

[Emerging Infections Program](#)

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